That which is claimed is:

1. A process for selectively oxygenating a distillate feedstock which process comprises contacting said feedstock with an oxygen-containing gas in an oxidation zone at oxidation conditions in the presence of an oxidation catalyst comprising a Group VIII metal component and a basic support and recovering an effluent stream distillate having an oxygen content incorporated therein.

2. The process of Claim 1 wherein the Group VIII metal is cobalt.

3. The process of Claim 1 wherein the basic support comprises magnesium oxide.

4. The process of Claim 1 wherein the basic support comprises calcium oxide.

5. The process of Claim 1 wherein the Group VIII metal is present in the oxidation catalyst in an amount ranging from about 0.1 wt. % to about 50 wt.% based on the total weight of the catalyst.

6. The process of Claim 2 where the basic support comprises magnesium oxide.

7. The process of Claim 2 wherein the basic support comprises calcium oxide.

8. The process of Claim 5 wherein the Group VIII metal is cobalt and the basic support comprises magnesium oxide.

9. The process of Claim 1 wherein the effluent stream distillate TAN number is less than about 2 mg KOH/g.

10. The process of Claim 1 wherein the Group VIII metal is present in the oxidation catalyst in an amount ranging from about 2 wt. % to about 20 wt.% based on the total weight of the catalyst.

11. The process of Claim 1 wherein the Group VIII metal is present in and amount ranging from about 4 to about 12 wt. %.

12. The process of Claim 10 wherein the Group VIII metal is cobalt.

13. The process of Claim 11 wherein the Group VIII metal is cobalt.

14. The process of Claim 12 wherein the basic support comprises magnesium oxide.

15. The process of Claim 12 wherein the basic support comprises calcium oxide.

16. The process of Claim 13 wherein the basic support comprises magnesium oxide.

17. The process of Claim 13 wherein the basic support comprises calcium oxide.

18. The process of Claim 1 wherein the effluent stream distillate has an oxygen content of about .02 to about 20 wt. % and a TAN number of less than about 2 mg KOH/g.

19. The process of Claim 18 wherein the Group VIII metal is cobalt.

20. The process of Claim 18 wherein the basic support comprises magnesium oxide.

21. The process of Claim 18 wherein the basic support comprises calcium oxide.

22. The process of Claim 18 wherein the Group VIII metal is present in the oxidation catalyst in an amount ranging from about 0.1 wt. % to about 50 wt.% based on the total weight of the catalyst.

23. The process of Claim 19 where the basic support comprises magnesium oxide.

24. The process of Claim 19 wherein the basic support comprises calcium oxide.

25. The process of Claim 22 wherein the Group VIII metal is cobalt and the basic support comprises magnesium oxide.

26. The process of Claim 18 wherein the Group VIII metal is present in the oxidation catalyst in an amount ranging from about 2 wt. % to about 20 wt.% based on the total weight of the catalyst.

27. The process of Claim 18 wherein the Group VIII metal is present in and amount ranging from about 4 to about 12 wt. %.

28. The process of Claim 26 wherein the Group VIII metal is cobalt.

29. The process of Claim 27 wherein the Group VIII metal is cobalt.

30. The process of Claim 28 wherein the basic support comprises magnesium oxide.

31. The process of Claim 28 wherein the basic support comprises calcium oxide.

32. The process of Claim 29 wherein the basic support comprises magnesium oxide.

33. The process of Claim 29 wherein the basic support comprises calcium oxide.

34. A process for selectively oxygenating a distillate feedstock which process comprises contacting said feedstock with an oxygen-containing gas in an oxidation zone at oxidation conditions in the presence of an oxidation catalyst comprising cobalt in an amount ranging from 4 to 12 wt.% and magnesium oxide and receiving an effluent stream distillate having an oxygen content of about 1.8 wt.% to about 10 wt.% and a TAN number less than about 1 mg KOH/g.